THE VETERINARY RECORD

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EDITED BY WILLIAM HUNTING, F.R.C.V.S.

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THE MINUTES OF COUNCIL MEETINGS.

The short report of last Council Meeting might have been allowed to pass without any special notice but for some remarks on the minutes. The business was simply to confirm two resolutions passed at last Quarterly Meeting; but before it could be proceeded with it was, of course, necessary to confirm the minutes of the previous meeting. This formality is very properly provided for in the Bye-laws; and any action based upon the proceedings of council might cause a good deal of trouble if it were afterwards found that a resolution was erroneously entered in the minutes. To guard against mistakes and irregularities it is the custom to have all resolntions put into writing and read out to the meeting by either the Secretary or the President before voting on them. At last Quarterly Meeting Sir Henry Simpson moved—or is reported to have moved—"That the proposal for a joint conference and enquiry as suggested by the Royal Veterinary College be accepted." These are the words according to our independent report, and our memory is in accordance with the shorthand writer's notes. Now, what was the enquiry suggested by the Royal Veterinary College? It was into the truth of a statement made by the Principal of the School to the Governors. The statement runs as follows :—

"Complaints have been made by some of the Students that the Practical Examination was not properly conducted—*i.e.*, that some of the Members of the Board did not attend, and were substituted by representatives who were not formally appointed as required by the Bye-laws of the Royal College of Veterinary Surgeons; and also that twenty candidates were examined on one day, some of them by candle-light."

In a memorial to the Council, signed by five Members of the profession, this statement was quoted. and an enquiry was "earnestly requested." Neither the College nor the Memorialists ever suggested any limitation of the enquiry to a part of the statement, and we have no hesitation in saying that every Member of the Council quite understood when he voted for the motion that the enquiry asked for was to be full and free, and untrammelled by any conditions.

At the Special Meeting Sir Henry Simpson objected to the confirmation of the minutes, and desired to add to his original motion two long sentences —one limiting the enquiry, and the other providing for the presence of one or more of the examiners implicated. Of course, if Sir H. Simpson really did propose this very different motion, he is right to insist upon it being correctly entered in the minutes. We have not been able to meet anyone who heard such words used, and it, therefore, is of importance that the original resolution, if in writing, should be produced. If the President had in his possession the long resolution Sir Henry claims to have put to the meeting he is greatly to blame for not having it read. The Members of Council vote for what they hear, and cannot be bound by any written resolution which is not read out to them. It is needless to say that the wording of a resolution cannot be altered after it has been discussed and carried. Sir Henry Simpson states that he "handed in his resolution in writing to the effect that he had stated." Mr. Mulvey asked, "Where is it?" but no answer was made. We hardly think it possible that such a thing could be done, but we would ask: Was the *written* resolution handed to the Secretary after the Council had voted on the *verbal* motion of Sir Henry? If so, we protest against any alteration of the minutes, and we protest still more strongly against such dangerous irregularity.

THE HYGIENIC CONGRESS.

Probably this Congress will be fixed in the memory of many delegates as much by the round of entertainments offered them during the week as by the various learned papers provided for their consideration. It certainly was a wonderful week of science and festivity. Putting aside the excursions to gas-works, sewage farms, hospitals, and cemetries, which a few enthusiasts are supposed to have made, there were garden parties, ladies' receptions, conversaziones, and dinners, which no one could avoid but by the most determined and misanthropic effort. The Royal College of Surgeons gave a conversazione in the Hunterian Museum, and learning, beauty and fashion walked and talked amongst the specimens of anatomy and pathology with apparently no such thought as was expected of a Roman Emperor when a skeleton graced the feast. One curious incident we witnessed. In front of an equine skeleton gathered a small group of savants. One gentleman recognised it as the skeleton of Orlando the race-horse, and made a few observations upon the beauty of its proportions. Another, more critical, suggested that the pedal bones were small and narrow—such in fact as no respectable thoroughbred could have owned. A third expressed the opinion that the skull was very large and very ugly—all agreed that if the specimen had not been in such a first-class place they should have had doubts of its authenticity. To make sure of its identity the label was looked for and this is what they saw —A SPANISH ASS.

The Royal College of Physicians, the City of London, Sir Douglas Galton, the Baroness Burdett-Coutts, and Sir Spencer Wells, all contributed to the list of entertainments. Last, but not least, we note the banquet given by the Council of the R.C.V.S., to the foreign Veterinary delegates. It was held in a magnificent hall at the Hotel Metropole, and was in every way a grand success, reflecting credit upon the President and upon Messrs. Raymond and Wragg, who had little time allowed them to organise the affair in the face of a week full of appointments and counter attractions.

CASES AND ARTICLES.

CANKER OF THE EAR.

By A. J. Sewell, M.R.C.V.S.

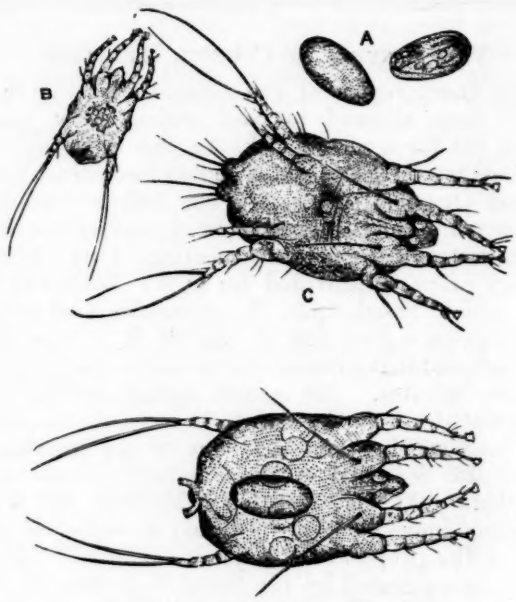
All those who have had much experience with dogs must have frequently noticed that they occasionally show signs of great irritation in the ear by constantly shaking the head, holding it on one side, and rubbing the side of the face along the ground, and now and then scratching the back of the ear with the hind foot; and yet, in some cases, on casually examining the ear, there is nothing much to be seen to account for these symptoms. A little dried brown excretion may be noticed, in fact the ears look just slightly dirty. The conclusion often come to is that if the parts were cleaned the irritation would cease; but such is not frequently the case, as I daresay many of your readers have observed, for, in spite of ever so much washing, the dog continues to shake his head, showing that he is still uncomfortable. If, instead of giving a hurried look into the ear in these cases, the parts are well examined and the canal leading into the ear is carefully watched, tiny white specks, oval in shape and about the size of the eye of a small sewing needle, will be observed. These are parasites, and are, in my opinion, the cause of the disease called canker of the ear.

I do not mean to imply that all diseases affecting the ear, and which are generally all called canker, are due to this parasite; on the contrary, there are many cases due to an eczematous diathesis, when there is a free discharge, and the bare part of the internal surface of the flap of the ear is also affected. Then there is another form of the so-called canker characterised by a free, offensive purulent discharge coming from the lower part of the canal, and which is often due to ulceration of the skin lining the external meatus. Sometimes the ulceration extends to the cartilage, and it may, and does, occasionally extend to the bones under the cartilage, and then the discharge is particularly offensive, and there is great pain. It is quite easy and proper to divide canker of the ear into three distinct and separate diseases, each requiring different treatment. Then there are those disorders affecting the flap of the ear generally due to injury or eczema, and called external canker.

However, it is not my intention here to go into details with regard to the several forms of disease affecting the ear, but to confine myself to that particular kind first mentioned and due to a parasite.

These parasites, which I have called the Psoroptes Auricularis Canis, are extremely active in their movements, and, if the ear be carefully watched for a few moments; they may be seen running about the skin and also along the hairs in the ear at a fairly rapid rate, considering their minute size; and the irritation which they cause is due in a measure, I believe, to the tickling sensation caused by their movement and partly the result of their biting.

I have had these parasites under observation for the last twelve months, but it is only just recently that I have been able to get some specimens to examine under the microscope, and these I have had drawn by an artist; and I must say in passing that he has done justice to his work, for the acari, when seen with the microscope, look exactly like the illustrations given herewith.



Psoroptes Auricularis Canis.
Magnified about 70 times.
A—Larval forms. B—Young Acarus. C—Male.
D—Female.

In one specimen of the larval form it will be noticed that the shell or covering has become partly removed, and the legs of the parasite are seen still lying curled round the body. This is exactly how it appeared in the specimen I examined.

B—is a young acarus not yet fully grown, and from the number of its legs it is probably a female.

C—A specimen of the male.

There are several distinctive differences between the male and female. In the first place the former has eight legs, it is smaller, and they are far less numerous, there only being about one male to every twenty females. The female (D) is thicker set, and has only six legs, and in the centre of the trunk is a small oval body, which I take to be an egg. In both cases the front legs are provided with suckers, which are somewhat triangular in shape and situated at the point of the toes. In walking the fore legs are only used, the hind ones not moving, but are dragged along with the body.

The Psoroptes Auricularis Canis does not burrow under the skin (epidermis), like the mange parasites, but lives on the surface, to which it attaches itself by its suckers.

To prove this I kept a number placed under a watch-glass upon my arm for a day, and though they caused slight irritation and raised small points by biting, they did not attempt to burrow. I also placed a number under a watch-glass upon the body of a hairless dog, and they did not attempt to burrow

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here; but they were very restless, for they could be seen with a strong magnifying-glass to be constantly travelling about, which looked, I thought, as if they did not feel at home in their new situation. They did not seem to have bitten the dog's skin, as after they were removed there were no signs of small blisters or papules. Besides, the dog did not seem to take the least notice of them, which would not have been the case if they had punctured the skin as they did on my arm. Of course the skin lining the passage into the ear is much thinner and softer, and here, I believe, the mites do bite, and as the result there is an exudation which, I consider, accounts for that brown and somewhat dry discharge so often seen in some ordinary cases of canker.

I have never been able to find the acarus anywhere else about the dog but in the ear; in fact, they do not seem to wander ouside the canal and crevices formed by the cartilage, not even upon the flap of the ear, either inside or out. They vary in numbers—sometimes one can only find a few, about twenty; in other cases they are present in hundreds, lying in clusters like a heap of fine white powder. I have also frequently found these same parasites in cats' ears, and in some cases they induce rather extraordinary symptoms, the cat being almost unable to walk; in fact, when it attempts to do so, the animal rolls about as if intoxicated, frequently falling over on its side. I have never seen the acarus cause the same symptoms in the dog.

The treatment and cure of canker of the ear when caused by the Psoroptes Auricularis Canis is a very simple matter, for, by applying some agent which will destroy these acari, the irritation at once ceases. I have found the following lotion to answer the purpose admirably in all cases, both in dogs and cats:—

The Lotion.

R/. Ung. Hydrarg. Nit. ... ... ʒi.
Ol. Amygd. ... ... ʒi.
Well mix.

It should be applied all over the internal surface of the ear daily with a camel's-hair brush, or a few drops may be poured into the ear. After a week the ear should be syringed out with tepid water and methylated spirits, about one in ten.

I have heard it more than once stated by men who have had large experience with dogs that they believed canker of the ear to be contagious; and no doubt it is, consideriug that it is due to a parasite which can be easily transferred from one dog's ear to another.

There is a somewhat similar acarus called the symbiotes spathiferus, which causes a certain form of mange in the horse; but I cannot find that this parasite described in the present article has ever been noticed in the dog's ear or mentioned before.

Contagiousness of Common Warts.

Dr. Payne *(Brit. Journ. of Derm.*, June, 1891, p. 186) relates that after using his thumbnail to remove softened warts, three warts developed on his thumb, confirming him in a view which he had entertained on other evidence that the popular belief in the contagiousness of warts is well founded.

EXTRACTION OF A FOREIGN BODY FROM A CAT'S THORAX.

By J. D. Walker, Vet. Student.

Some months ago I observed in the columns of the *Record* the particulars of a case in which the ribs of an umbrella were successfully extracted from the thorax of a cow, and subsequently, having to deal with a similar case in a cat, I thought a description of it might prove of interest to your numerous readers.

The other day I was waited upon by a lady, whose acquaintance with soap was undoubtedly most remote, bearing in her hand a basket of considerable antiquity, which I perceived to contain a half-grown cat. The lady briefly stated what she knew of the case, which amounted to the statement that "the wee cat has swallowed the mistress's big needle, and I cam' doon to see if you could save the cat or save the preen!" On examining the animal I observed that the point of the pin was protruding from the apex of the chest, between the first pair of ribs. After taking measures to avoid being bitten or scratched, and then applying some degree of force, the pin was withdrawn, and proved to be over six inches long—one of those usually employed by ladies to adjust their headgear. The pin was almost as long as the cat's body, and how it got lodged is a mystery. When released the cat ran about the floor quite unconcernedly. An antiseptic was applied to the external wound, and the cat restored to the messenger, who enquired what was the charge. On being told that the fee was the nominal one of half-a-crown, astonished, the lady exclaimed: "My God! the wee cat's no worth the hauf o' that!" The last time the cat was seen it was enjoying the most perfect health.

TUBERCULAR DISEASE IN A COLT.

By S. Chambers, M.R.C.V.S., Kirkheaton.

A chestnut cart gelding, four years old, began to fall off in condition in March last, when the owner called my attention to him. I thought that the colt was suffering from dentition fever, and I lanced his gums and gave him a few doses of nitrate of potass. I heard no more till the owner called a week ago, and informed me that the colt was fit for nothing but the knackers. I told him I was sorry to hear that, and if he would send him to my place I would see if anything could be done, not knowing that another veterinary surgeon had had him under treatment in the meantime. He was sent, and I was struck with the alteration in his appearance since I saw him last; his belly was tucked up, and he was very thin. Standing three yards off one could see the jugular pulse, and when the head was lowered the slightest the jugulars filled; his pulse was irregular, and numbered from sixty to one hundred beats a minute, taken at intervals. Trotting him few yards caused the heart to beat very violently. On auscultation of chest I could hear a grinding

against the inferior part of walls of the chest only, and on both sides. Nearly every time the colt moved backward or forward he groaned. I advised slaughtering him, which was done; and I found tubercular pericarditis, pleuritis, also tuberculosis of inferior portions of the lungs—the liver being only slightly affected; the kidneys quite sound.

PS.—Since writing this I have seen the vertebral bones of this horse, which the knackers had boiled. They were all, especially the cervical, covered with a deposit of bony matter—possibly due to scrofulous ostitis.

RETENTION OF A CALF IN UTERO.

A fortnight ago I was called in to see a roan heifer, which had calved three months before—a beautiful beast, I am informed, at that time; but nothing but skin and bone when I saw her. The owner said she had discharged large quantities of white matter from the womb ever since she calved, and had retained the after-birth for a fortnight. I thought the case was one of ulcerated womb, and injected two drachms each of sulphate of zinc and acetate of lead, dissolved in a quart of warm water, into the womb three times at about four days' interval. As she grew worse I advised slaughtering her, which was done. On making a *post mortem* examination I found a fully-formed calf in an advanced state of decomposition neatly wound up in a thickened placenta, and lying loose in the womb, surrounded with a quantity of matter. Of course, the calf ought to have been delivered three months before. Not suspecting such a condition, the opening into the womb being so small as barely to allow the introduction of my finger, I did not detect the presence of the calf during the life of the cow.

S. C.

MESENTERIC HERNIA IN A PONY.

By E. A. Hollingham, M.R.C.V.S.

As in my experience these cases are extremely rare it occurred to me that a few details concerning one which recently came under my notice might be of interest to your readers. The subject was a dark brown pony gelding, seven years old. I was called to attend it at 1 p.m., on Sunday, August 2nd. I found it suffering from a very sharp attack of colic, and in a profuse sweat. Hyd. chloral ʒiv was administered in cold water; in a short time the acute pain was relieved; the ears and legs, however, remained deadly cold for quite an hour, but gradually warmed after repeated hand-rubbings and bandaging. By this time the body was also dry and comfortable. At 4 a.m. I found there were colicky pains at intervals of five or six minutes, the patient looking round to the left flank. A subcutaneous injection of morphia and athropia was given, and also a full dose of physic. Enemas every hour, and mustard application to abdomen were ordered. At 12 noon there was the same sort of colicky pains, but not so frequent; the animal during the seizure pressing the left flank hard against the box door. In the intervals there was a dejected, "don't care" expression about the patient which, when associated with a failing pulse, I have always regarded as presaging a fatal termination. At this stage I ventured an opinion that we had to deal with either strangulation or calculus. There were no fresh symptoms of interest until about 10 p.m., when the sweating became once more profuse, the pulse could no longer be felt, and death took place about 12 o'clock Sunday night.

On *post-mortem* examination I found a rupture about 2½ inches long through the mesenteric membrane, a portion of the ilium, about 5 inches long, had turned over, passed through the opening, and become strangulated. I have the specimen, and would send it on if you care to see it. The points of interest to me are—Firstly, the extreme and continuous pain suffered during the first half hour, which was probably the period of the act of strangulation. Secondly, the fitful, and by no means excessive, pain which followed. Thirdly, the localisation of the pain, as persistently indicated by looking at the *left* flank, and pressing the part against the box door.

VETERINARY SOCIETIES.

*TUBERCULOSIS OF THE DOMESTICATED ANIMALS.

By J. M'Fadyean, M. B., B.SC., F.R.S.E.

(Concluded from page 88).

The Danger of the Milk and Flesh of Tuberculous Animals as Articles of Human Food.

1. *Milk.*—Regarding the danger of milk from tuberculous cows, opinion at the present day is almost unanimous. It admits of no denial that tuberculosis of the cow's udder is not a rare disease, and it is equally certain that when that organ becomes the seat of tuberculosis, the bacilli at a comparatively early stage of the process are present in the milk. Such milk invariably proves infective when susceptible animals are experimentally fed with it, and there is every reason to fear that the result is the same when it is unwittingly consumed by human beings. The only point now uncertain is whether the milk may be infective while the mammary gland itself is still apparently healthy. In view of the positive results obtained with the milk of cows in which no udder lesion could be detected, it cannot be asserted that the milk is devoid of danger even when the tuberculosis is slight and apparently confined to some organ remote from the udder. At the same time, there is still reason to hope that tubercle bacilli are present in the milk only in cases of general tuberculosis, or when a tuberculous lesion exists in the udder itself. The danger to human beings is even then a most serious one. At the present time, milk from cows with tuberculosis of the udder is being daily distributed in every city in the kingdom, and there exists no adequate legal machinery to prevent its sale. There are two methods by which the danger might be reduced to a minimum, or altogether removed. The first of these lies in the hands of the consumer, viz. to raise the milk

* From a Paper read before the Meeting of the National V.M.A., at Doncaster, July, 1891.

to the temperature necessary to ensure the death of tubercle bacilli or their spores. Dr. Bang has shown that even when the milk is rich in tubercle bacilli, it is rendered non-infective by a short exposure to a temperature of 85° C. By the simple precaution of steaming the milk for a few minutes, every one can therefore absolutely defend himself against the danger of contracting tuberculosis through this common and almost necessary article of diet; and in the existing state of affairs, every parent who is not informed regarding the health of the cows from which the family milk is obtained, would do well to see that this precaution is adopted, at least in the milk for young children. Unfortunately, milk that has been boiled or steamed is to many persons unpalatable, and hence many will doubtless prefer to continue to use it raw, even although its consumption in that state is not free from danger.

But the public have surely a right to demand that when they purchase what purports to be wholesome milk, that article of food shall not have mixed with it the germs of a deadly disease. The absolute assurance that milk is free from tubercle bacilli is probably not attainable, but it would not be difficult to frame and carry out regulations that would greatly diminish the present risk. All milch cows ought to be submitted to veterinary examination at intervals of not more than a fortnight, and every dairy-keeper ought to be interdicted from selling the milk from a cow that in the opinion of the veterinary inspector is the subject of tuberculosis in any organ of the body. If any one considers that such restrictions on the sale of milk would be too harassing for the farmer or dairyman, it may be pointed out to him that conditions much more stringent have been imposed upon the cow-owners supplying milk to some of the largest and most profitable dairy companies in the world, notably the Copenhagen Milk Supply Company.

2. *Meat.*—Regarding the danger attending the consumption of the flesh of tuberculous animals, opinion is much more divided. It is contended, on the one hand, that "human phthisis comes frequently from the butcher's stall," that bovine tuberculosis is a disease *totius substantiæ*, and that the entire carcase ought to be condemned whenever a tuberculous lesion, no matter how circumscribed its apparent limits, is discovered in the body. On the other hand, there are many who maintain that only a small proportion of cases of human tuberculosis can with any reason be ascribed to infection through tuberculous flesh, that in the vast majority of cases bovine tuberculosis is a local disease, and that the health of the public is sufficiently safeguarded when the visibly diseased parts and their lymphatic glands are withdrawn from consumption.

The opinion that the consumption of tuberculous flesh is a main cause of human tuberculosis is negatived by every consideration bearing on the point. In an overwhelming number of cases of human tuberculosis the disease has its primary seat in the lungs or bronchial glands, and countless experiments prove that such a localisation of the lesions indicates unmistakably that the virus has penetrated by the respiratory mucous membrane. Even if animal tuberculosis were stamped out of existence, phthisis might continue to rank as the greatest scourge of the human race. Only those cases of human tuberculosis in which the primary lesions are seated in the alimentary canal or its associated lymphatic glands can reasonably be ascribed to infection by means of bacilli contained in ingesta, and, indeed, of this restricted list many cases are almost certainly due to ingestion of bacilli that previously had a human being for their host. But even admitting this, the danger attending the use of tuberculous flesh is still to the human sanitarian a matter demanding careful consideration. If only 1 per cent. of cases of tuberculosis in man were caused by eating flesh from animals affected with tuberculosis, it would still be the duty of medical men and veterinary surgeons to make every effort to make the transmission of the disease in that way impossible.

It is matter for surprise that there should still be uncertainty as to whether the entire carcase, and more particularly the muscles, of an animal contain tubercle bacilli whenever a tuberculous lesion exists in any part of the body. Strictly speaking, probably no one takes up the absurd position of maintaining that a localised tuberculosis never occurs, but it is contended by many that in a large proportion of cases of tuberculosis in which the discoverable lesions are confined to one organ and its lymphatic glands, the bacilli are already distributed throughout the entire system by means of the blood-stream. Others believe that bovine tuberculosis, like actinomycosis, is in the majority of cases a local disease, and that it is only in a small proportion of cases that the entire system is contaminated with the bacilli. This, it is evident, is a dispute capable of being settled by experimentation. It has not yet been definitely settled, and, indeed, the number of experiments bearing upon the point in dispute is comparatively small. The older, and some of the recent experiments made with tuberculous products throw absolutely no light on this point, and must be put aside. For example, the result of a feeding or an inoculation experiment with visibly tuberculous materials cannot be cited in this connection; and even when the matter used for inoculation has been taken from an apparently healthy part of the body, the experiment is valueless unless the precautions necessary to prevent accidental contamination have been strictly observed.

The three largest series of experiments with expressed muscle juice have been made by Bollinger, Nocard, and Galtier. Bollinger found the juice non-infective in every case (twelve); Nocard found it once infective in twenty-one experiments; Galtier found it infective six times out of twenty-five. To these I may add a series of fourteen experiments recently carried out by myself, at the request of Professor Brown, in which the result in every case was negative. It thus appears that out of a total of seventy-two carcases experimentally examined, a positive result was obtained in seven cases, and it will be noted, as a remarkable fact, that six of these seven cases occurred in the hands of one experimenter. If one were warranted in concluding from these experiments that the muscular system contains tubercle bacilli in about 10 per cent. of all cases of apparently local tuberculosis, the case against partial seizure would be made out; but until a larger number of experiments have been made, there must remain a doubt that at least some of the positive results obtained by Galtier were due to accidental infection. Unless the strictest antisepsis is maintained throughout the whole course of such an experiment (sterilization of knives, meat press, syringes, hands, etc.) a positive result carries no weight.

The International Congress for the study of tuberculosis, held in Paris in 1888, voted in favour of total seizure, and a similar resolution was almost unanimously passed by the International Veterinary Congress which met in the same city in 1889. Notwithstanding these declarations in favour of total seizure, that practice is, I believe, nowhere followed; and in this country, where meat is not consumed in the raw state, there is probably no appreciable risk in passing for consumption the entire carcase when the lesions are confined to one organ and its lymphatic glands.

The Prophylaxis of Tuberculosis.

Under this heading I propose to consider shortly what are the circumstances that contribute to the present prevalence of tuberculosis among our domesticated ani-

mals, and from them to deduce the measures best calculated to diminish or suppress the disease.

1. *Predisposition.*—Every case of tuberculosis is caused by the entrance of the tubercle bacillus into the animal body. That admits of no discussion. Formerly it was believed that the cause of tuberculosis was to be sought in a peculiar quality of the tissues of the body, in consequence of which inflammation, by whatever cause produced, tended towards a caseous metamorphosis of the inflammatory exudate, and a subsequent general infection by absorption of some product of the caseous degeneration. This peculiar tissue weakness was supposed to be eminently hereditary, and an explanation was thus offered of the observed fact that the offspring of tuberculous parents themselves frequently became tuberculous.

When Koch proved that without the tubercle bacillus there could be no tuberculosis, to account for the special prevalence of tuberculosis in particular families it was assumed that the tubercle bacillus had an ubiquitous distribution on the earth's surface, that every one was therefore frequently or constantly exposed to the infection, and that the large proportion of victims claimed in particular families was ascribable to a special tissue weakness, in consequence of which the tubercle bacillus was able to propagate with vigour within the body. This explanation of the fact is now held by very few, and in the main it is undoubtedly erroneous. What we know regarding the conditions necessary for the continued existence of the tubercle bacillus in the outer world leads us to expect that the organism cannot be everywhere present, and experiment has fully proved the correctness of that supposition. At the same time it is by no means disproved that constitutional predisposition does not play an important part in determining what individuals shall be the victims of tuberculosis. Indeed, one might go further, and assert that the observed facts, both in human and veterinary practice, strongly support the view that with tuberculosis, as with several other diseases, the tissues of certain individuals and races offer an unusually congenial soil for the propagation of the parasite. The shorthorn and Ayrshire breeds of cattle are almost universally credited with a marked susceptibility or predisposition to tuberculosis, and probably many veterinary surgeons, as the result of their own observations, are absolutely convinced of the correctness of this opinion. That an unusually large number of animals of these breeds fall victims to tuberculosis cannot be gainsaid, but, as will subsequently be pointed out, other factors besides racial predisposition may contribute to that result.

Heredity.—Is tuberculosis frequently inherited? To this question many will probably without hesitation answer in the affirmative, and yet a full consideration of all the evidence appears to justify precisely the opposite conclusion. To prevent any possibility of misconception, it may be well to explain that the point now being considered is whether any notable proportion of animals are at the moment of their birth already tuberculous or harbour the tubercle bacillus within their tissues. If congenital tuberculosis were common, then the bovine species ought to furnish a large number of examples, (1) because tuberculosis is extremely common almost everywhere among milch cows, (2) because tuberculosis of the genital organs is probably more common in the cow than in any other animal, and (3) because an immense number of calves are killed and eviscerated immediately after birth. Nevertheless, there are on record only seven cases of indubitable congenital tuberculosis in the calf, and to explain that fact in any way consistent with the view that more than an inconsiderable proportion of bovine animals are tuberculous at the moment of their birth, is quite impossible. If any further proof in the same direction were required, it would found in the circumstance that the proportion of tuberculosis is vastly greater among adult than among young cattle.

Infection.—If the tubercle bacillus is not ubiquitous, and if, save in quite exceptional instances, animals are born free from that organism, how, it may be asked, is the disease contracted? To answer that question let us limit it to the case of cattle. An animal that is already the subject of tuberculosis is a sort of natural hot-bed for the propagation of the specific germ. In every tuberculous focus the tubercle bacilli grow and multiply, and since in many instances vast numbers of the organisms are passed into the outer world, every tuberculous animal tends to contaminate its immediate surroundings, and is a source of danger to other susceptible animals kept in contact with it. The extent to which a tuberculous animal contaminates its surroundings with tubercle bacilli depends in large measure on the localization of the disease. For example, an animal might be the subject of tuberculosis of the serous membranes or of the lymphatic glands, and yet be without danger to its companion animals; for when the lesions are strictly localised to the parts mentioned, there can be no outward passage of the bacilli. But the case is different when a tuberculous focus exists in the lung, for tubercle bacilli are then usually discharged into the outer world. These organisms, however, are not, as is sometimes supposed, passed out in suspension in the expired air. They are contained in the bronchial mucus which is projected through the mouth or nose in the act of coughing, and such expectorated mucus adheres to any surface against which it may have been projected or speedily falls to the ground. In the moist condition the expectorate is but slightly dangerous so far as infection by the respiratory passages is concerned, but what settles as a speck of mucus on wall or woodwork will soon become dessicated, and if detached it may pass into the atmosphere as a dust particle, and be inhaled by any inmate of the same building. This, beyond any doubt, is the common mode of infection in the case of bovine tuberculosis. Everything is plain when this view is adopted. Tuberculosis is a disease of domestication, in the literal sense of the word. Our young stock (exception made of the infection through milk) are exposed to less risk than adult stock, for they are less closely housed. Dairy cows, and especially those kept in city byres, are the most frequent victims of tuberculosis, because they are frequently stalled the whole year round. The disease proves more infectious in proportion as the animals are overcrowded, and in proportion as the ventilation is defective, for these conditions obviously favour the transmission of bacilli from animal to animal in the manner above sketched.

In the light of the preceding account of infection, it is evident that the special prevalence of tuberculosis in particular breeds and families may erroneously be ascribed to a special constitutional predisposition. As previously mentioned Shorthorns and Ayrshires are generally credited with such a predisposition, but these are *par excellence* our most highly domesticated breeds, and hence the risks of infection are proportionately great. It would obviously be fallacious to take as the criterion of predisposition or diathesis the proportion of cases occuring in two such breeds as Galloways and Shorthorns, and experience proves that even West Highland cattle and other mountain breeds show no pronounced resistance to infection when they are housed with tuberculous animals in badly ventilated buildings.

Tuberculosis, according to our present knowledge, is an incurable disease, but it is an eminently preventable one; and its present alarming prevalence is the natural result of the almost universal neglect of those prophylactic measures that are indicated in the case of every infectious disease. It is the province of the veterinary

profession to diffuse among stock-owners a knowledge of the true nature of the disease, and to point out what are the rational means of prevention. These may be briefly summed up as follows:—

1. Systematic inspection of the stock at short intervals, with a view to detecting tuberculosis as early as possible. Every animal reasonably suspected of being affected (and this applies especially to animals that give evidence of pulmonary tuberculosis) ought to be promptly slaughtered or isolated.
2. Adequate ventilation of cow-sheds and other cattle buildings.
3. Cleanliness and periodic disinfection of the walls, floor, woodwork, etc.

These measures could not be expected to promptly exterminate such an insidious and widespread disease as tuberculosis, but it is a not unreasonable hope that if they were systematically enforced, the malady would in a few years be reduced within very narrow limits.

BORDER COUNTIES VETERINARY MEDICAL SOCIETY.

The July Meeting of this Society was held at the Keswick Hotel, Keswick, on Friday, the 3rd inst. The members present were: Mr. J. Howe, Keswick (President); Professor Walley, Mr. J. Carlisle, Mr. A Pender, Mr. J. Tallentire, Mr. J. Robson, Mr. J. Donald, Mr. J. Young, Mr. J. Soulsby, Mr. H. Thompson (Treasurer), and Mr. J. Armstrong, Penrith (Secretary). There were also present as visitors: Dr. Webb (Principal of the Aspatria Agricultural College) and Mr. T. Holmes, Newcastle.

Before proceeding to business the members present sat down to an excellent tea, provided by Mr. Wilson, of the Keswick Hotel; after which, on a plot of grass adjoining the hotel, Mr. DONALD gave a practical demonstration of his new method of tying and casting colts for the surgical operation on rigs. The method is the same as described and illustrated in his paper on the subject published in Professor McFadyean's *Journal of Comparative Pathology*. Mr. Wilson kindly lent one of his horses for the demonstration, which was witnessed with much interest by the members present.

The members then adjourned to one of the large rooms of the hotel, where the PRESIDENT took the chair and opened the proceedings. He expressed his regret that there were not more members present, though he hoped they would have a useful and profitable meeting. He very heartily welcomed them all to Keswick, and was very glad to meet them there, and especially their old friend, Mr. Carlisle. (Applause.)

The SECRETARY read the minutes of the previous meeting.

Mr. THOMPSON moved the adoption, and explained that in co-operating with other societies to further the election of the reform candidates for the Council Board our society expenses had been £2 19s. 1d.

Mr. DONALD seconded the motion, and the minutes were unanimously adopted.

NEW MEMBERS.

On the motion of Mr. DONALD, seconded by Mr. SOULSBY, Mr. Potts (of Dalston) and Mr. Ward (of Workington), who had been nominated at the previous meeting, were duly elected members of the society.

Mr. YOUNG nominated Mr. Garnett (of Bowness-on-Windermere), and gave notice that he would move his election as a member of the society at the next meeting.

The SECRETARY read letters of apology from a number of the members who were not present, including Professor Penberthy, Professor McQueen, and Sir Henry Simpson. A letter was also read from Messrs. Burnett and Nisbett, regretting their inability to be present, and thanking them for their election to the Council.

THE INTERNATIONAL CONGRESS.

A letter was read from the Secretary of the Seventh International Congress of Hygiene and Demography, asking the society to subscribe to the expenses.

Professor WALLEY, who was asked to give them some opinion on this matter, said as far as he was concerned he had little to do with it, any further than he was a subscribing member, and had, in connection with one or two of the societies, to make replies on some of the questions. He might tell them that the Glasgow and the West of Scotland societies had devoted the sum of £2 2s. each. It would be assessed with considerable expense, and would be of as much interest to them as to the medical profession. He thought if the society saw its way to contribute it would be very useful. Individuals might become members by subscribing the sum of £1.

The PRESIDENT pointed out that the funds of the society were very low, and did not see how it could contribute anything.

Mr. DONALD said they could not vote anything as a society—they were not in a position to do so. It would have to be left to the individual members to do what they could for it.

Mr. THOMPSON, speaking as the treasurer, said the funds were very low. While new members were joining the 10s. 6d. entrance-fee helped the funds, but they had now to depend upon the annual subscription of 5s., or nearly so, which, in his opinion, was too little to meet the annual expenditure. As a society they could not send any money to the Congress. If they thought of getting up special contributions they might in that way be able to send a donation. With regard to the Steel Memorial they were just in the same position.

The PRESIDENT asked if they thought it would make any difference in their membership if they made the annual subscription 10s. 6d. instead of 5s.?

Mr. YOUNG thought it would be a good thing to put a motion on the circular for the next meeting to raise the subscription to 10s. 6d.

Mr. DONALD said he thought they should strike off all the delinquents. He would rather they were not recognised as members at all than remaining on the books and never paying their subscription.

The PRESIDENT said it would be better to keep to the subject of the Congress till it was settled, and a motion was then passed, "That as a society they could neither become subscribers nor forward any donation."

A similar resolution was also passed in regard to the Steel Memorial.

Mr. YOUNG gave notice that at the next meeting he would move that the annual subscription of membership of the society be raised to either 7s. 6d. or 10s. 6d.

THE REARING OF CALVES.

The PRESIDENT observed that this was the subject of a paper read by himself at the previous meeting. There was then a discussion upon it, but the subject was considered of so much importance by their friend, Mr. Carlisle, and others, that it was thought worthy of further discussion at another meeting. Hence it was on the agenda, and was the next subject to come before them. The discussion would be opened by Mr. Thompson.

Mr. THOMPSON said he was sorry to see such a small attendance. He quite hoped to see a good number present, and he was very much disappointed indeed. With reference to the paper read by the President at the last meeting on the rearing of calves, he was not in time to hear it, though he had read it in *The Record*.

Next to abortion he thought the rearing of calves one of the most important subjects to the veterinarian. In some districts nearly 70 per cent. of the calves died from diarrhœa or scouring. In his opinion a good deal of this was due to the management. There were a good many points in the paper with which they must all agree—such as the keeping of young calves in damp and badly-ventilated byres, and only feeding twice a day, which practices were against nature altogether. The diseases which were so common in young calves were seldom seen in the foal or in the lamb—therefore, there must be some special cause.

As white scour was the principal portion of the paper, he would direct his attention to it. We have diarrhœa in calves in a very simple, and again in a very aggravated, form—in fact, contagious, as it were—and possibly due to the lactus bacillus. There must be a cause to every effect, and his opinion was that there were more causes than one of white scour in calves, and, in some cases, a combination of causes. The duty of the veterinary attendant was to investigate these causes, and act accordingly. The complaint, he had no doubt, was, in many cases, due to the practice of feeding the young animals only twice a day, gorging their little stomachs every twelve hours with a quantity of milk. And yet he could fix his mind on some of his clients who only fed twice a day, and reared calves with the greatest success; But in these cases the owners attended the young animals themselves, and observed their condition, never forcing the food upon them should they refuse to take the usual quantity of milk, but waited a few hours, and, if the calves appeared to be ill, gave them some opening medicine—castor oil being generally the remedy; and it was in cases like these that we had the simple form of white scour. In fact many of his clients laughed at him when he named the great fatality arising on some farms from this disease. But it was quite another thing when the servants fed the young animals. If the calves did not take their milk they were forced to it by the milkmaid putting her fingers into the calves' mouths, and inducing them to suck, thus engorging the stomach which already contained a quantity of undigested curded milk. The result was irritation, and nature's effort to rid herself of the irritant by setting up diarrhœa.

Again, on many farms a large tub was set in the middle of the box, when four to six calves could drink at once, some getting a larger quantity than others. This was also frequently a cause of the disorder which on many farms, when once established, ran its course in an infectious or contagious manner, and was frequently fatal and very bad to get rid of. It attacked young calves before they had even got any milk, commencing with the complaint as if they had brought it into the world with them.

He had known farms where there had been as many as twenty affected in one stock. It is very fatal in cases of this kind; great care should be taken to keep the byres clean and well ventilated. In one case which he had come across, for five or six years in succession prior to his being called in, into the teens of calves had yearly been lost. The sanitary surroundings of the premises to look at seemed in good condition; nevertheless, he had all the floor taken up, the matters which had accumulated cleared away, and the place well washed with carbolic acid and lime. This was done once a month, and it took over two years before they got rid of it.

With reference to twice-a-day feeding, when they considered that the fourth stomach of the calf was the largest and the true digestive stomach—called the rennet, and used for curding the milk in the manufacture of cheese—it would be understood that if we give calves big feeds of milk at a time, the milk curded, as the first process of digestion, immediately it reached the stomach, and was not digested by the time they had to to be fed again. Large quantities given in this way were injurious; it should be given oftener, and in less quantities. As a preventive sanitation was to be considered both in the first place, and also for arresting the disease where it had got hold. He believed that the feeding of the cows had a good deal to do with the complaint, and great care should be taken in this respect. Wherever decorticated cotton cake was much used they found a great deal of mortality amongst young calves; and although this was one of the best artificial feeding cakes for milch cows, it was too rich in nitrogen and too stimulating for the young calf's stomach. It, therefore, should be withheld for, at least, three weeks before and three weeks after the birth of the calf. He also recommended the milk to be twelve hours old, the cream taken off, and the milk raised to a temperature of 90 degrees in a hot-water bath, mixed with a wine glassful of lime water, and given four times a day in small quantities. With reference to medical treatment he used the following as a preventive, which he found to answer splendidly, viz.:—

Calves Carminative.

R/. Soda Bicarb.	... ...	4	lbs.
Magnes. Carb.	... ...	4	„
Pulv. Rhei.	... ...	1½	„
„ Zingib.	... ...	2	„
„ Cassia	... ...	1½	„

Mix.

Two table spoonfuls to be given morning and night in the milk.

For treating the complaint he gave the following which had a good effect upon foals, lambs, and calves, viz.:—

Diarrhœa Mixture.

R/. Pulv. Creta ppt.	... ...	1½	oz.
Magnes. Calc.	...	1½	„
Rhei. ...	... ...	2	„
Tr. Opii B.P.	... ...	1½	„
Zingib. ...	... ...	1	„
Catechu	... ...	2	„
Ol. Cassia ...	... ...	1	dr.
Aqua Ad ...	... ...	16	oz.

Mix.

Doses: Foals, one wine-glassful; lambs, one table-spoonful; calves, two table-spoonfuls. To be given night and morning in a little cold water.

Bronchitis in calves was a very serious complaint, more particularly when associated with white scour, which it frequently was. He believed it to be reflex, and due to the irritation and disordered condition of the stomach and bowels, and always treated the disease as such.

Another complaint affecting young calves was frequently met with in his district, where large ulcers formed on the tongue, gums, and side of the cheek. Some of these ulcers were as large as a crown-piece, and the centre contained a slough resembling mouldy cheese; the animals generally looked badly, with a dry, staring coat. Treatment was to remove the slough with a spoon handle, and dress with Tr. of iron, give chlorate of potass and hydrochloric acid in medicinal doses night and morning.

There were many other complaints affecting the rearing of calves which the President had not touched upon in his paper. He would not allude to them further than name navel-ill and joint-fellon. These diseases he believed to be of a septic nature, and mainly due to the navel string not being tied at birth, which he thought should be done in all cases.

Mr. CARLISLE said he quite agreed with Mr. Thompson in a great many respects in regard to his modes of treatment of the disease. In his opinion, however, they

had never yet arrived at the real cause of it. It struck him that in many cases the disease appeared to be infectious. In many cases he also found that the lungs were very much inflamed; he did not know whether Mr. Thompson had observed that or not? He found that when people had lost two or three valuable calves they become very anxious, and want to know what is to be done so that the disease may be prevented. Even with Mr. Thompson's treatment they found they could not stop it, and he was sure Mr. Thompson would often be disappointed. They would die in spite of all the good treatment, and what he wanted to find out was the cause of the disease; the symptoms were nearly always alike. Hoose often came along with scour, and in that case he always found the lungs affected, and they were bad to cure when in that condition. There was also a great difference in the seasons. In some seasons they hardly saw a case, and in others nearly all the calves in the locality go in it. If they have one case they would be sure to have more, and in his opinion it was one of the most important things to find out the cause, and then they would soon find the remedy. He would like very much to hear the opinion of Professor Walley upon it.

Mr. THOMPSON said he forgot to mention that isolation was one of the most valuable precautions to prevent the spread of scour.

Mr. CARLISLE said there was no doubt it was the best thing to get them out from amongst the rest when they observed that they were affected. One of the very worst things was to overload the stomach. Good sanitation was necessary, and milk at a proper temperature. It was also necessary that the attention of those that were feeding the calves should be kept on their work. They very often found that the maid was having "a lark" with the servant lad at the time she was feeding the calves, and she paid no attention to the manner in which the animals took their food, nor the quantity which they got.

Mr. PENDER, who had previously alluded to the difficulty there was in getting people who sold all their milk to conform with the modes of feeding alluded to, said it seemed to him they were all pretty much agreed with regard to the treatment of the disease; but they seemed to be at a loss, like himself, to find out the cause. Whatever was the remote cause of it, it seemed to arise with indigestion due to over-feeding, and the rapidity with which they drank the milk, coupled with damp and badly-drained byres. The want of exercise also, he thought, had a good deal to do with it. He would advise feeding three or four times, or more, and the giving of a good dose of medicine as soon as the disease was observed. He always took care to warn the people to give the calves time to drink the milk slowly. Where they had not gone too far, and where proper feeding was adopted, and the byres were in good condition, they generally got better. If they had good sanitary surroundings, proper attention to feeding, and something given promptly to relieve the curd of the milk in the stomach, they would hear very little about scour in calves.

Mr. DONALD thought that the first class of illness referred to in the President's paper was due to indigestion. He thought the whole process of treatment laid down was correct; although they might apply them differently, they appeared to be all about the same. With the general treatment laid down by the President he quite agreed, but he could not agree with all the medicines he prescribes. They all adopted, more or less, the same means to relieve the animal, but he thought the same effect could be brought about by simpler and less painful medicines.

The PRESIDENT said he had proved the medicine which he prescribed to be very effectual, and he would stick to it till they could show him a better. (Hear, hear.) He thought it would be wise to avoid giving a quantity of magnesia in a granular form. A little treacle added to the milk was very simple, but it kept the bowels right.

Prof. WALLEY said he would be pleased to add what little he could. He was much pleased to be there to hear the discussion, but would have been more pleased if there had been more members present to have joined in it. Regarding the illness in calves he agreed with much that he had heard from Mr. Thompson. There were one or two things which he had not mentioned which were worthy of notice. One was that calves ought to be kept on the mother for a week, and should have no other food until they could digest their milk. In many cases, where they sold all the milk right off, as Mr. Pender had said, it would pay them better to cut the throats of the calves than to put them on to the mother; but in other districts natural feeding is the best. In proof of this they need only look at the Hereford cows, where they were allowed to go loose in the fields and the calves were allowed to live with them. They never found any of the calves ill in this way when allowed to go with the mother. In a case that came under his own notice the calves did well when allowed to be with the mother, though they lived on a place that was not better than a dung heap. It was quite clear that the calf sucking the cow would pass the milk into the fourth stomach, where it was converted into curds and whey before it was digested: if they made a post-mortem of the calf they would always find the milk in fourth stomach. As the calf sucked the milk it did so slowly and in small quantities at once; it slowly passed into the fourth stomach, and as long as it remained there it would do no harm. But when they kept the calf hungry it gulped the food down, and the force with which it passed down caused much of it to go, not into the fourth stomach, but into the rumen, where it set up conditions that mostly proved fatal. In the matter of foals, if they served them in the same way they would have exactly the same conditions: they would have inflammation of the bowels and so forth. He quite agreed with them as to the results of feeding calves only two or three times a day: it was against nature. They would feed on the mother whenever they were ready, and would not take much at once. The disease was now becoming to be recognised as due to micro-organisms. After speaking of the necessary treatment from this point of view, he alluded to the treatment of Dutch cattle, which were landed at Leith in a very dirty condition. The milk was boiled, and then allowed to go cold and mixed with a little water. They got more good from that than any other way of treating the milk. It disinfected it, and did not injure it. In some cases in giving other medicines they might give too much acid, and would have to give nitrate of soda to counteract it. Bronchitis in calves, it seemed, was terribly common about there. In that case they should be removed from damp quarters as far as possible. With regard to the ulceration referred to, he thought this must have arisen from foot and mouth disease and was due to a bacillus. He would like them to try carbonate of soda, or iodine in these cases. Speaking of it as a contagious disease, he said they ought to take every means to prove by actual contact whether it was contagious by inoculation. Sanitation in connection with this disease, just as much as in scour, should be carefully carried out: it appeared that people thought any place was good enough for calves to be kept in. In all cases both of lambs and calves he had advised that the navel should be tied. Where the Dutch cows come in he could not get them to do that.

Mr. CARLISLE said that in opening calves having congestion of the lungs he had always looked upon it as caused by the effects of micro-organisms and was most

probably due to impurity of the blood. As a preventive he had seen good results from the treatment of a little chloride of potash in the milk. This all took place before the animal began to ruminate.

Mr. ARMSTRONG spoke of the calves dying within a few days of their birth, and thought the disease did not arise so much in themselves, but was due to their mothers. He had often been successful in saving the calves by treating the mothers—by beginning with the cows, when the disease was prevalent, about a month before they were due; and some of the calves had been brought up in the most beastly places. With regard to bronchitis he had no hesitation in saying that it was due to the reflex action of the stomach. He would have them fed five times a day with skimmed milk boiled, and a table spoonful of lime water to every pint of milk, and a table spoonful of camphor mixture where bronchitis seemed to have even been suspected. Ulceration in the mouth was very common, but he had never once seen a case from the lips extend to the tongue or the bones, and he did not find the "abscess" to re-form when he cleaned them well. He had generally found that bad sanitation of the cow-byres was the main cause of scour.

Mr. HOWE (the President) said a few words on the discussion. He said it was impossible for him to reply to them all separately, but he was very well satisfied that the paper had caused such a good discussion. He was satisfied that it was one of the most important things connected with the profession at the present day. They could do a lot of good by advice as to treatment if they made themselves thoroughly acquainted with the nature of the subject. He believed that any kind of solvent that they could give to break up the curds would have a good result.

Mr. CARLISLE thought it would be a good thing if veterinarians would take more care in registering any special cases that came under their notice, their mode of treatment, and the results. Hundreds of calves died from this disease when from two to three months old. He referred to his mode of treating certain cases 20 years ago, when he used to make a hole in the wind pipe and blow turpentine through a tube into it. Under this operation he used to see the filaria coming out by thousands. In reply to Professor Walley he said he had practised that for 20 years at least.

Professor WALLEY said this showed that there was "nothing new under the sun." It was only about four or five years ago that this had been practised, and it was considered an experiment quite new within that period If Mr. Carlisle had acted upon the advice he had just given in regard to special cases, their treatment and results, he would probably have had the credit of being the discoverer of tracheotomy in this respect.

A paper on "Crypt-Orchids and their Emasculation" was to have been read at the meeting by Mr. Donald, but as so much time had been occupied with the President's paper, and as Mr. Donald's paper was appearing in Professor McFadyean's *Journal of Comparative Pathology*, it was resolved to take it as read, and discuss it at the next meeting of the society.

A vote of thanks to the President brought to a close a very pleasant and interesting meeting.

JOHN ARMSTRONG, *Hon. Sec.*

IT is stated in a German pharmaceutical journal that piperazidine dissolves uric acid more readily than any other substance of a basic nature. Urate of lithia requires three hundred and sixty-eight times its own weight of water to dissolve it, but urate of piperazidine dissolves in fifty times its weight of water. It may therefore be expected that this drug will become a fashionable remedy in gout and allied diseases.

YORKSHIRE VETERINARY MEDICAL ASSOCIATION.

The summer quarterly meeting of this association was held on Tuesday, July the 31st, at the Queen's Hotel, Leeds, the President Mr. Theo. C. Toope (Knaresbro.) in the chair; and there were also present Messrs. J. S. Carter, Walter Lodge, Jas. Cooke, George Pickering, A. W. Briggs, John Appleyard, A. W. Mason, G. E. Bowman, J. Clarkson, Frank W. Somers, W. F. Greenhalgh, Hon. Sec., J. E. Scriven, Hon. Treasurer, Philip Deighton and Sam Chambers. Messrs. Neil and Arthur England (Leeds) were present as visitors.

On the motion of Mr. Briggs, seconded by Mr. Bowman, the minutes of the last meeting were confirmed.

The Hon. Sec. said he had received apologies for non-attendance from Prof. Williams and Messrs. Axe, G. Carter, H. Cooper, P. Exley, Whitehead and others.

SPECIMENS.

Mr. COOKE exhibited a specimen of scirrhous cord which he said he had taken from a yearling colt. When he saw the animal five weeks after the operation of castration had been performed by Torsion it was lame and emaciated. He operated on the spermatic cord with the result that the animal was now thriving and was free from lameness. He put on first a Pritchard clam, and the animal was cast in the usual way, without chloroform.

The PRESIDENT:—You would get no hæmorrhage.

Mr. COOKE:—No, there seemed to be a cyst inside.

The HON. SEC.:—Was it healed up?

Mr. COOKE:—Yes, quite healed up.

The PRESIDENT:—This is an interesting specimen, but it is not an uncommon result of castration, if you remove both testicles at once you often get it. You fuse the two cords together, you should remove them by bringing the scrotum down.

Mr. PICKERING:—For the last four or five years I have always taken both testicles away together with the Ecraseur, and I have never had one case of scirrhous cord.

The PRESIDENT:—Perhaps you bring the scrotum down.

Mr. PICKERING:—Yes, I do.

Mr. LODGE:—I have found that a good pull at the tail has been of service.

The PRESIDENT:—Before I learnt this trick I had a good deal of trouble but I have had none since.

Mr. BRIGGS drew the attention of the meeting to the case he had reported in *The Record* of lameness arising from scirrhous cord in a black Welsh gelding.

Mr. COOKE said he knew an animal working on a farm suffering from the disease, and it would lie down regularly.

The PRESIDENT said he had never seen acute lameness following on the disease.

On the motion of the President, seconded by Mr. Lodge, a vote of thanks was accorded to Mr. Cooke.

THE CONGRESS OF HYGIENE.

It was decided that the President, Mr. A. W. Mason, and the Hon. Sec., Mr. W. F. Greenhalgh, should represent the Association at the above Congress.

THE EXAMINATION OF HORSES AS TO SOUNDNESS.

By GEORGE T. PICKERING, F.R.C.V.S.

Mr. President and Gentlemen,

We all know the importance of this subject, and, in introducing it to you this afternoon for discussion,

my object is that all here shall give their opinions and advice. By so doing we shall perhaps be able to solve some of the difficulties by which we are surrounded, with regard to difference of opinion, liability, etc. I do not know how long veterinary examinations of horses have been a custom—perhaps before the colleges were founded. No doubt the public would then, as now, wish to have the opinion of those who had a better knowledge of the diseases of the animals they had. The public know the value of an expert's opinion, or we should not be called in as often as we are to decide as to the soundness or unsoundness of valuable animals. I am sorry to say latterly public opinion has gone rather against our profession, owing to recent trials and differences of professional opinion. If we wish our services to be valued we must do our utmost to protect them by giving sound advice, which can only be given by those of us who have had a good and careful training, and plenty of practical experience in this branch of our profession. The public judge us, and they are not long in finding out the men who are best fitted for this kind of work, and value our services and employ us accordingly. Certainly we do not all have the same opportunities, but when once a veterinary surgeon has made a reputation as an expert in the examination of horses he has plenty of recommendations from those who have employed him.

Let us remember that the vendor is generally desirous of selling, and often gives us a lot of voluntary information which we should be better without—praising up his animal, and saying all he can in his favour. We have not the opportunities of perusing a medical history sheet that a medical man has when called in to examine a man as to soundness; we cannot get to know what diseases the horse's parents or near relations suffered from. If these were hereditary we should then have some guide which would help us to give an opinion on certain diseased conditions we come across.

The purchaser is generally our employer. Let us always bear in mind that it is our duty to protect him to the utmost of our skill and knowledge; and if he is a man who has not much knowledge of horses I think we should sometimes give him further advice as to the desirability of purchase.

Let us remember that if we are either negligent or lack professional skill, we are not competent to examine a horse.

At auction sales we have few, if any, facilities for examination; there is not room in the various yards, and they are not suitable for a thorough examination. Some horses are sold as good hunters—that is a warranty for wind and eyesight; but even when these two important parts are warranted, we cannot always test the other parts as we should like. Some horses are warranted sound. Of course, if there is any doubt in the intending purchaser's mind he has them examined *before* the sale, which, for us, is better than having to examine a horse that has been warranted sound after it has been sold; for that generally means two or three opinions being brought in. By the sales of horses by auction at the various repositories we do not get so many journeys from home as we otherwise should; and although some say these sales are better for our profession, I think not. We do not have so many horses to examine, and we do not get such facilities for a careful examination. Vendors, as a rule, do not give warranties, because they have often led to a great amount of unpleasantness, and trials have been the outcome of disputed warranties. The veterinary profession now give the warranty when they give the certificate. and they are held responsible and sued for the price of the horse examined should they make a mistake. The vendor gets the money, the purchaser the horse, but the veterinary surgeon is looked to for the price paid by the purchaser. We all of us have taken our diplomas, and are legally qualified to examine a horse as to soundness; some have had more experience than others in this branch, but those who feel the responsibility most are the young practitioners. Some are almost afraid to pass a horse sound. We can sympathize with them. We know the feeling, similar to what we have in performing certain operations—not that we cannot perform the operation, but it is the knowledge of the risk of non-recovery, and consequent loss of property to our client and of reputation to ourselves, which makes us feel uncomfortable and anxious; so the knowledge of certain recent trials that have gone against members of our profession, and the sums that have been paid which would have ruined some of the younger practitioners, reacts upon them. My experience in examinations has varied from a donkey to a race-horse. I once had a donkey to examine for soundness, but did not charge a guinea—I got five shillings, which was about one-twelfth of the animal's value; and if we always got paid on this scale we should do very well.

For an example, the subject I shall take will be a hunter, as he can be adapted for almost any purpose, and is certainly the most useful breed of horse as well as one of the most valuable.

You are requested to examine one, and go and see him in the stable. You must bring your powers of observation to their best state. Watch carefully his position of standing. Notice whether he is a weaver, a wind sucker, or crib biter; be sure the head is let down, and mind he is not racked up: if not satisfied, tell the groom to give him a handful of corn and keep out of sight for a moment. Get all the information you can from attendant, we can sometimes get valuable information as to how long they have had the horse, etc. Observe carefully the position of fore limbs, see that there is no pointing, or resting in an unnatural position, navicular disease, or sprain of back tendon. Notice how he moves over in the stall; sometimes he will turn over lame on one hind leg, which might be a symptom of hock lameness; or click one hind leg up sharply, which is a sign of stringhalt. Before going up to the horse ask the attendant if he is quiet; speak to the horse and notice whether he hears you or not. I heard of a man the other day who bought a horse that was deaf, and never would move when spoken to but only when touched. Horses that are blind will work the ears backwards and forwards in an unnatural manner; the sense of hearing is generally well developed in a blind horse. When you get up to the manger, especially at a sale yard, and where there are fresh horses, notice whether he has eaten his feed. Look along the body and see there is no double expiratory movement, which is a sign of broken wind. Take hold of the horse's head and make a feint as if you were going to strike him, or better, give him a smart stroke on the body and see if he grunts; sometimes two or three trials are necessary before the horse will show these signs. I generally also make the horse cough, especially at a sale yard, when the case looks rather suspicious of being affected with broken wind, and you have not the facilities for a good gallop.

I next have the horse brought to the door, and if I can, get a good light to examine the eyes, clear of any light-coloured objects in the vicinity; if you are wearing a light-coloured tie, or a white pin on a black tie, be careful it is not reflected on to the eye. Compare the size of the two eyes; notice the position in the head; feel the tension of the eye-balls by pulling the eyelids down and feeling with the middle finger, if at a normal tension they should yield slightly on pressure with the finger. There should be no puckered condition of the eyelids, nor discharge of tears, for these are symptoms of ophthalmia. Sometimes there is a discharge of tears from one eye which may be due to obstruction of the lachrymal duct; cover the eye with your hand,

and see that the pupillary opening dilates and contracts naturally, and that both openings are the same on removal of the hand, when light is admitted. A black hat should be taken, and each eye should be examined separately for opacity of the cornea, cataract, glaucoma, iritis, gutta serena, or gloss eye, taking hold of the animal's head with the left hand placed above the nose, the right hand holding the hat over the eye in front, and gradually working it steadily over the whole surface. The appendages should be examined, eyelashes and lids for injuries. Slight opacities or marks, perhaps caused by the lash of a whip, if out of the centre of vision may not interfere with the eyesight, but if caused by a hard blow we sometimes find the horse is also suffering from cataract. The opacity may be much diffused, then it might interfere with the vision. Glaucoma; opaque condition of aqueous humour; corpora nigra, sometimes so enlarged that they interfere with the vision. Examine the iris; then the lens for cataract—capsular, lenticular, and capsulo-lenticular. Any thing abnormal in this most important organ should not be missed as such defects diminish the value and usefulness of the animal considerably. As the stable is generally not dark enough to examine the eyes by the catoptic test I have the horse taken into a dark box when he comes in from his gallop and examine there, when you ought to get the three images of the candle or taper, two inverted and one straight, which work backwards and forwards as you move the candle.

Have the horse now trotted out steadily on hard ground, have a snaffle bridle on, and be sure the groom gives him his head, so that it may be free. Observe how he starts, and look well at the hind limbs as he goes from you; you must detect any lameness about the hind limbs as he goes away from you. Grooms have a habit of running them on almost out of sight if not called back, so it is best to call them back when they get 20 yards or so. Observe how he comes towards you, now looking out for any lameness forward. Notice how he turns round. I find it a better plan to have the horse trotted steadily out direct from the stable, because if there is the slightest stiffness or lameness you can, by carefully observing, detect it at once. If you have not a method in going about your work in examinations, you are sure to get wrong, and if you run from one part to another perhaps give those about you the impression that you do not know your work.

Make the man stand to his head; now stand in front of the horse and carefully observe him. Notice the position; begin at the near side and walk quietly round him, you can often pick out some slight defect and are also able to get the description. A man who is a judge or purchaser always does this, you get an idea of colour, marks, size, formation, breed and sex. Compare opposite parts, limbs, joints, such as shoulders, knees, fetlocks, feet, thighs, and quarters, with practice you can almost tell whether he will pass in his limbs or not, or at least have some idea. I always begin at front of head and on the near side. See that the lips are not swollen or injured; that there is no paralysis of lower lip due to pressure on facial nerve; no eruption nor sores of any kind, cuts, nor bruises at angle of mouth. Raise the lips, and notice the colour of visible mucous membranes; take the temperature of the mouth with finger; note condition of membrane, if dry or slimy.

Examine incisor teeth for age and marks of "Bishoping." The principal points to be careful about are the following:—Mistaking temporary for permanent teeth; the temporary or milk teeth are white, broader and more constricted at neck. Sometimes a two year old has been passed for five. At three years central incisors meet. At four years lateral incisors meet. At five corner incisors meet. A lot of horses are sold as five when they are only four by removing the corner teeth; this can be detected by the post part of the tooth not being worn, and up as should be, the part being shelly. The infundibulum is not filled up. Of course, if it came to a thorough examination the last molar tooth does not make its appearance until the horse is five; and the presence or absence of this, would prove, without doubt, whether the animal was four or five.

The tush makes its appearance between four and five. At five the mouth is up. All the permanent incisors are in the mouth; at six, marks out of central incisors; at seven, marks out of lateral incisors; at eight, marks out of corner incisors. And so on with upper incisors.

After eight we can only give an approximate opinion, as horses' mouths differ so considerably. We must note the curve of the front of the mouth, which varies with age from half-a-circle to nearly straight; the protrusion of the teeth from the jaws, and the general appearance of the animal. Notice the tongue, then the molar teeth, and observe lower jaw for fractures or injuries by the bit. We must not overlook the schniderian membrane, the nasal bones, the lateral sinuses, nor any signs of caries, or of alveolar abscesses. Also examine for poll evil or enlarged glands.

I remember a remarkable case two years ago. I examined a horse for a customer, and noticed on the head a depression on the frontal bone. I passed him sound, and have since heard that he has bolted on several occasions. I have no doubt this is owing to his having received some blow on the head, which affects him at certain times.

Take the pulse and note its character. Bring the hand along top of mane on the near side, look for injuries caused by bridle or headstall or marks left by cribbing strap. Next larynx; trachea. See that there have been no injuries, press the fingers in the jugular furrow, and see that the vein is pervious. Examine the point of shoulder, and compare sides for presence of wasted shoulder; the elbow joint for capped elbow, and other injuries; inside and front of radius for injuries, fracture &c. Look to the knee for ankylosis of joint, knee spavin, splint, broken knees, marked knees, speedy cutting, contusions, bruises, etc. With regard to splints I think we may say there has been more cases of difficulty than perhaps with regard to anything else, because a horse may be sound one day and unsound the next. I think the great thing is age. If the splint is near the joint you will have lameness, and if it is well away from the joint or tendon, I think you may pass the animal; but certainly mention it. Sore shins, sprained tendons, sprained ligaments, sprained fetlock joint, neurotomy. Examine for ring-bone, injuries to pastern, cracked heels, side bone, sand crack, false quarter, quittor, seedy toe, laminitis, navicular disease, corns, etc., odd feet, contracted and irregular feet. On the body we look for fistulous withers, sore backs, sprained loins, ribs, injuries, etc. Look at the sheath, scrotum and inguinal region. In hind limb note contour of hips, the stifle and thigh. The hock requires special care, not only as to developed disease, but as to form and the presence of suspicious marks.

Saddle on. With regard to the wind you must consider the animal's fitness, condition and breed, the kind of field, and the day, as to it being windy.

The principal thing is with regard to the condition of the horse. You would not expect a cart horse or a harness horse to perform as a hunter would. Some horses soon begin to blow, and I don't think it is necessary to give them the same test as a hunter. With regard to wind, a horse may one day make a slight noise, and you would perhaps refuse him, and another man a few days after might say he was all right. In some horses it may be a thickness in the larynx. Examine the nasal passages and look out for whistling, roaring, broken wind, &c.

With regard to certificates, I may say I have studied the subject since the recent trials. I had a printed form, saying, "I hereby certify I have examined," &c., and "in my opinion he is sound (or unsound)." At the bottom I said: "This certificate is given after careful examination, but I don't hold myself pecuniarily responsible." But I can't get over this—if we accept the fee we are liable for our opinion. What I do now is this: "Dear sir,—At your request I have this day examined a bay colt" (description), and go on to state any spavins or other defect I may detect. I put down as an expert what the defects are. When I mention defects I qualify the remarks. I say, with regard to the splints, "I don't think they will interfere with him; but he is slightly lame on the off fore, and I should not advise you to purchase him." The only mistake is where the examiner hasn't mentioned something he has noticed. With regard to purchasing a £30 or £50 horse for myself, I should not consider it necessary to adopt all the tests I should use for other people. Many dealers object to an examiner going to so many tests. There is no doubt it is coming to this. We shall have to be more careful, or there will be an end to examinations for soundness. What a professional man must do if he makes a mistake is to call in his friends and ask for advice. With regard to the eyesight there is always some positive evidence of disease, and with regard to splints, ring-bone, side-bone, and wind, or anything else abnormal, the same. The only disease where we have a difficulty is spavin. A horse may have coarse hocks; one man may examine him and refuse him, and another may pass him, and he never go lame. If there is the slightest enlargement of the joint, before I run him I get a man to flex his hocks for several minutes. If you get a horse, six or seven years old, and he has good strong hocks, and there is an enlargement with a jagged appearance, you may mention you saw the enlargement, but I think you would be justified in saying the horse would stand his work. Where we have the difficulty is in a young horse, where there are no symptoms of a spavin, and he goes and does hard work and developes a spavin. I do not agree with a man "looking" so much. If I run my hand over the hock, and find it dwells, there is something wrong. I think we can learn more by touch than anything else. Where a man looks so much he often takes coarse hocks for spavins.

Discussion.

The President: I am sure Mr. Pickering has given us a very interesting paper, and our thanks are due to him. I would like to hear any remarks from the gentlemen present, but this is a subject of such wide interest that I think it would be advisable to adjourn the discussion to the next meeting.

Mr. Lodge: We are all very much interested in this paper, for Mr. Pickering has treated his subject in a very capable manner. At the same time I should like to witness Mr. Pickering making an examination of a horse in order to see if he goes so carefully and minutely about his work as he has described. (Laughter.) I am convinced that we are a great deal to blame for many cases coming into court against us. I think if we were to lean towards each other, to try to help each other, and try to advise our clients a little more, there would be fewer cases brought into court. A veterinary surgeon examines a horse, and though he uses every care he perhaps makes a mistake, another may make some remark about some point of the animal, and the owner say he had had it examined. Then the second man may say it was not sound, examined or not; and this gives rise to strife and contention. I regret to say it seems almost a general thing for one man to run down another. Depend upon it, we shall never raise our profession to the standard of the medical profession until we help each other and cling to each other. We have only ourselves to blame that we are not in as good a position as medical men. As to the examination of horses, I think Mr. Pickering said we use far greater care for a client than we do for ourselves. Now, I don't think, as a rule, we give such extraordinary prices as our clients do. (Laughter.) When we buy for ourselves we are not running the same risk as in the case of a valuable horse for a client. As to the certificate, Mr. Pickering did not tell us how he worded his communication in case he found an animal sound, so as not to render himself liable in case he made a mistake.

Mr. A. W. Mason: This is an interesting question, and Mr. Pickering has gone into a good deal of detail. One of the points was that when a horse was not actually sound he might be practically sound. Now, I think it is a fact that in making examinations of horses for soundness we rarely find an animal sound. I always begin to hesitate when I find a horse technically sound. Mr. Pickering lays great stress on that particular portion of the horse's anatomy, the hock. He is, no doubt, justified in doing so. It is a part of the horse regarding which there is a great deal of difference of opinion. Those who have been in Ireland will know that you may see three horses with distinctly different hocks. I am afraid a young member of the profession would be condemning all the horses, more or less, till he got experience. The great thing with regard to the hock is the conformation of the hock. Never mind the small lumps. If you see a good sound bold hock, you need take no notice. With regard to splints, I mention the defects, point them out, and let the buyer take the risk. It is a difficult matter with regard to what you write on paper. You may have a useful horse in your mind's eye, and one you think will do your client good service; but if you write a certificate, pointing out all his technical defects, the horse will not be sold. You would like the horse to be bought, and yet you don't like to go too far. I never now write a certificate unless it is absolutely demanded. I put it in the form of a letter, and I think if you follow that out you don't get into such trouble. Put it in the form of a nice flowing letter, be careful how you word it, and be sure to keep a copy of it. (Laughter.)

Mr. J. Carter: It is evident this is a subject Mr. Pickering has paid a great deal of attention to. I may say I have examined many scores of horses without so much minutiæ. With regard to the hocks there has been as much difference of opinion and judgment during the last forty years as in anything else. I remember the predecessor of the late Mr. Dray, of Leeds, rejected every horse having the slightest enlargement of the hocks. There are a great many horses from Ireland and Wales with coarse hocks; but if the enlargement is well back, I have hitherto passed them, and I have had no cause for regret. If the splints are near the knee I mention them, and if they are pretty well forward I like them better. I have never had much trouble with regard to them. In regard to many horses I have had to take the risk. At the same time we are liable. With regard to the certificate I am careful as to wording it, and I think the less you say the better. If you go very carefully into it you make your clients throw the horse up, or you get into trouble sometimes about it. If you make it concise so much the better. If you put the word "sound" it doesn't matter what else you put. "Sound" means "sound," and, however much you explain it, the word stands. If there is anything wrong with it, and you use that word, you are liable no matter what it is. With regard to the fee, I think a guinea is too little. (Hear, hear.)

Mr. G. Bowman:—I think if we followed Mr. Pickering we should rarely have cases in Court. As to asking questions of stablemen I don't agree with him at all. (Hear, hear.) I never ask a question and know there-

fore I never have lies told me. If grooms will lie for anybody they will for their masters. With regard to giving certificates, it is all right saying you will write a letter. I sometimes examine 40 or 50 horses a year for a large London dealer, and he won't accept a letter. He wants a certificate, and I have to say whether a horse is sound or not, and likely to be a good hunter. With regard to eyesight I think it is difficult to make a mistake where care is taken. With regard to hocks it is a very difficult thing indeed to decide. I believe you can find sound hocks and still odd hocks in the same animal. There is no doubt that what Mr. Lodge said is true. There are members of the profession who like to find fault with another, owing perhaps to jealousy. If a man made a mistake there were plenty of men to go against him, and injure him to the greatest extent in their power. I think the wind is the most difficult thing we have to deal with, owing to the many peculiar noises we meet with in a horse. In large towns people buy horses with badly formed limbs and if you certify them to be sound and they go lame, it leads to unpleasantness.

Mr. COOKE:—I think in the examination of horse's hocks the age of an animal should be taken into consideration. I believe what constitutes unsoundness in a three or four year old would not constitute unsoundness in a six year old. As to spavins I believe what is a spavin in this country is a spavin in Ireland. Mr. Pickering speaks of the Yorkshire five year old. It is a common term, but I don't think it applies altogether to Yorkshire alone. There are other counties where the teeth are "faked" besides Yorkshire. (Hear, hear.) In my town and district it is a common thing to draw out the four year old teeth to make the animals appear to be five year old. I know animals four year old with the five year old teeth well up, and many would pass them as such. I think this "faking" or otherwise torturing ought to come under the notice of the R.S.P.C.A. If they put a stop to it it would render far greater service to the veterinary surgeon than many of the things they make such a fuss about at the present time. (Hear, hear.) I believe nothing pleases a dealer better than to get the best of a veterinary surgeon, and I believe occasionally they will do some very unscrupulous actions. They are men as a rule whose friendship is not worth having. (Hear, hear.)

On the motion of Mr. Lodge, seconded by Mr. Carter, it was decided to adjourn the discussion to the next meeting.

A vote of thanks to the President concluded the proceedings.

W. F. GREENHALGH,
Hon. Sec.

Royal College of Veterinary Surgeons

SPECIAL MEETING OF COUNCIL, HELD AUGUST 5TH, 1891

PRESENT—Professor Penberthy; Sir Henry Simpson; Messrs. Barford, Fraser, Hunting, Kidd, Wheatley, Mulvey, Raymond, Wragg, and A. W. Hill (Secretary).

The SECRETARY said he had received a telegram from the President, Mr. Lambert, stating that he would be unable to attend the meeting, as he was absent from London.

Professor PENBERTHY moved that Mr. F. W. Wragg be asked to take the chair in the absence of the President. Mr. MULVEY seconded the motion, which was carried.

Mr. F. W. WRAGG then took the chair.

ABSENTEES.

The SECRETARY said he had received letters from Messrs. Greaves, Taylor, Nisbett, Mason, Blakeway, Walley, Trigger, Burnett, Edgar, and Malcolm, regretting their inability to attend the meeting.

MINUTES OF THE PREVIOUS MEETING.

Mr. MULVEY moved that the minutes of the previous meeting be taken as read and confirmed.

Sir HENRY SIMPSON objected to the confirmation of the minutes, on the ground that his resolution with regard to the suggested inquiry by the Royal Veterinary College had not been properly worded. He said that the part of the resolution which he had moved at the previous meeting, and which had been omitted as follows:—"That the subject for consideration be paragraph 4 of Professor Brown's report, in which he stated that twenty students were examined in one day last December; provided that the examiners whose conduct is in question, or one of them, be permitted to attend the proceedings, but not to vote; and that the enquiry be held within the Royal Veterinary College." He begged to move that that be added to the minutes.

Mr. W. HUNTING said he had no recollection of those words. He certainly should not have voted for the motion if he had heard them; and until there was some proof that the meeting understood those words to be part of the motion, he should object to the minutes being altered.

Sir HENRY SIMPSON asked the Secretary if he had received the resolution in writing from him.

Mr. HUNTING said the President ought to have read the full resolution, which he apparently did not do.

Professor PENBERTHY moved that the matter stand over until the next quarterly meeting, and that in the meantime the matter be looked into, and steps taken to see if the original resolution could be found.

Mr. HUNTING seconded the motion.

Sir HENRY SIMPSON said there was this difficulty, that the resolution as recorded in the minutes might be acted upon at any time. Not only his conduct, but the conduct of other gentlemen had been implicated. It was a serious thing for anyone to alter minutes, or to direct that a resolution should not be registered in the usual way. The Secretary was perfectly aware that the matter was placed in his hands in the form of a resolution, and he was equally aware that he had sent it to the President. The College was the depository for all official documents, and nowhere else.

Mr. MULVEY asked Sir Henry Simpson if he had handed in his resolution in writing to the effect that he had stated.

Sir HENRY SIMPSON:—Yes.

Mr. MULVEY:—Where is it?

The CHAIRMAN:—The Secretary explains to me that he sent it to the President.

Sir HENRY SIMPSON said he wished the remainder of his resolution added to the minutes. He did not think any gentleman could possibly object to that, as no one would undertake to say what was not a matter of fact.

Mr. KIDD asked whether the minutes of any regular quarterly meeting could be confirmed at a special meeting. It was his own impression that they could not.

The SECRETARY said it was usual to confirm the minutes at the next meeting, whether special or otherwise.

Professor PENBERTHY moved—"That the minutes of last meeting of Council be confirmed, with the exception of that part which relates to the wording of the resolution by Sir Henry Simpson." Mr. FRASER seconded the motion, which was agreed to.

The minutes, as amended, were then signed.

Alterations of Regulations and Bye-laws.

Mr. Mulvey moved the confirmation of the following alterations of Regulations and Bye-laws, passed at a special meeting of the Council on the 23rd of July last :—

1. That the Regulations passed 7th January, 1891, as to the Matriculation Examination, be rescinded, and that the existing Regulations remain in force.
2. To alter Bye-law 31 : That this Bye-law be altered so far as the first three lines, ending at the word "President," to read : "A report of each examination, signed by the Chairman of each Section, shall be transmitted to the President and Council, stating the names of successful candidates, the general standard of excellence attained in each subject, and referring to any other matters which it is desirable should be notified to the Council."

Mr. Raymond seconded the motion, which was carried *nem. con.*

The official seal was affixed.

The meeting then terminated with a vote of thanks to the Chairman.

Veterinary Dinner--Hygiene Congress.

On Friday, last week, the Council of the Royal College of Veterinary Surgeons entertained the foreign Veterinary Delegates to the Hygiene Congress. The Banquet was held at the Hotel Metropole, and was as great a success as any of the hospitalities shown to *nos amis les étrangers*. Mr. Lambert, C.B., took the chair, and the attendance was as follows :

President—J. D. Lambert, Esq., C.B.

Dr. Chauveau, Paris.	Professor McFadyean
Professor & Dr. Arloing, Lyons.	Professor Penberthy
Professor Railliet, Alfort.	F. Raymond, Esq.
Professor & Dr. Bang, Copenhagen.	F. W. Wragg, „
Dr. Perroncito, Turin.	Sir H. Simpson,
Dr. Ostertag, Berlin.	Jas. Simpson, Esq.
Professor M. Nocard, Alfort.	Geo. Fleming, „
Professor & Dr. Blanchard,	Chas. Hunting, „
Dr. Sergius Ivanor.	F. Jarvis, „
„ Sims Woodhead.	H. Lepper, „
„ Pearson.	M. Hedley, „
„ Hime.	A. Wheatley, „
„ Menard.	F. Jarvis, „
„ Trasbot	J. E. Jarvis, „
T. J. Reeves, Esq.	Dr. McWeeney, „
Ernest Clarke, „	„ P. Webb, „
A. W. Hill, „	W. Hunting, „
	F. Duck, „
	C. Rose, „
	H. J. Surmon, „
	W. Bower, „
	G. H. Elder, „
	Professor F. Smith.
	Chas. Sheather, Esq.
	E. A. Hollingham, „
	— Barrett, „

The toast list was a short one, and the proceedings closed early to enable the members to look in at Sir Douglas Galton's Conversazione at the South Kensington Museum, which was *the* event of Friday evening. If we made as favourable an impression on our foreign visitors as they did upon us we may well rest satisfied.

EXTRACTS AND NOTES.

IMMUNITY TO POISONS AND TO CERTAIN INFECTIONS.

Professor Giacosa, of Turin, makes a communication on immunity (*Riforma Medica*, June 19th, 1891) of which the following are the main points : It has been long recognised that all animals are not equally susceptible to a given drug. Tolerance may be due to one of several causes ; it may be (*a*) the result of habit, as in the case of arsenic eaters, tobacco and opium smokers, etc. ; it may be that (*b*) the organ or function on which the drug acts is absent or but little developed, as in frogs, on which morphine has no narcotic action, but only produces tetanus through its action on the spinal cord. Many other instances, however, cannot be thus explained ; for instance, how can we account for the resistance of fowls to strychnine, and how is it that goats and snails can feed on belladonna with impunity ? We cannot admit any difference in elementary action—the same protoplasm, the same function, ought to be modified in a constant manner by a given dose of a drug under similar conditions. If the effect be different (drug, dose, and other conditions being unchanged), this must be attributable to differences in the nature of the protoplasm and of its functions. We may thus have, in the reactions to poisons, a means of distinguishing differences which cannot be detected in any other way. Comparable with this "pharmacological" immunity we meet with pathological immunity—namely, the inability to contract certain diseases. This analogy is especially made evident by recent bacteriological inquiries, which have traced certain phenoma of disease to poisoning by chemical substances produced by microbes in the tissues, A person may be "immune" in two ways : either he does not form a suitable soil for the infective microbe, or its poison may be neutralised by others formed in his body. The latter explanation is probably as frequently true as the former. Artifically, also, we can produce an immunity by setting up a tolerance, as is done, in the case of Pasteur's vaccines for anthrax, etc. This is strictly comparable with the pharmacological tolerance above described, in which continous small doses will eventually confer immunity from the effects of large ones. Professor Giacosa has sought to determine whether what is true for the product of animal will also hold good with respect to a vegetable alkaloid—whether the blood of an animal immune to strychnine is capable of conferring this immunity on another animal. It has been established that fowls can take as much as nine grains of strychnine without showing any symptoms. Starting from this knowledge of the defibrinated blood or serum of these animals was injected by him into the peritoneal cavity of white mice, guinea-pigs and rabbits, after which doses of strychnine were given. The results, however, as regards any protective action, were always negative, there being never even slight diminution of symptoms as compared

with those exhibited in control animals. Immunity in the fowl does not, therefore, appear to be due to any special property of the blood. In this connection it will be interesting to mention some experiments of Claude Bernard, who found that by causing arterial blood from an animal poisoned by strychnine to flow into the veins of a normal animal, no symptoms of poisoning occurred in the latter. This shows that the poisons stays but a short time in the blood, and is always extremely diluted, being absorbed nearly as fast as it enters the circulation. It may be that this is the explanation of Giacosa's negative results, and that the poison remains too short a time in the blood for the fowl's serum to have any action on it. It may be, on the other hand, that the immunity in fowls to the action of strychnine consists in a greater difficulty of absorption of this substance.—*British Medical Journal.*

Veterinary Honours

The Queen held a private Investiture of the Orders of the Bath, St. Michael, and St. George, the Indian Empire, and the Distinguished Service Order, at Osborne, on Tuesday last. In the list of those who were introduced to her Majesty's presence, and received the honour of the Order of the Bath we find Principal Veterinary Surgeon James Drummond Lambert.

Obituary

We learn that Mr. James Howell, of Milnrow Road, Rochdale, died on the 10th inst, after a long illness, aged 77 years. His Diploma of Membership bore date December 4th, 1839; and of the Fellowship, February 20th, 1877.

What the Congress has accomplished.

"In your view what has been most notable in the way of absolute work by the Congress? Where do the advances lie as compared, say, with the Vienna Congress, the last one held, I believe?"

"There have been several wholly new sections in the present Congress; that—to give one—dealing with the relation of diseases in animals to the diseases which afflict the human race. The Congress marks a distinct and important advance in that study, and truly it is a most important study. We are told by one delegate only yesterday, that cats communicate influenza to human beings, and certainly they communicate diphtheria. A child fondles a cat and is smitten with diphtheria. You ask how came the cat to have diphtheria? We can only say that you open up another question. This illustration of the cat brings home my meaning when I say that, in tackling the sympathy between animal and human diseases, we are tackling a great question."

The Sunday Sun.

The Hygienic Congress.

To a Hygienic meeting, scientific screeds repeating,
on tuberculosis treating, came the wise and erudite;
And of tæniæ they tattled, while with Azräel they battled,
till his bony structure rattled as he shuddered with affright

Mourned the madness melancholic of symposiums alcoholic,
spoke in phrases hyperbolic of the bovine udder rash;
Told the tricks of trichinosis, scarlatina, and necrosis;
told of actinomycosis, and of diphtheretic "hash."

And before those learned teachers with the grave and sombre features,
all minute morbific creatures were as chaff before the flail:
From the membrane telephonic dried the molecules zoonic,
for their process zoogonic was no longer of avail.

By suggestion and appliance did those wizard men of science
set the microbe at defiance. and defy the rabid germ;
Showed the truth as in a mirror, and corrected ancient error
by divesting of their terror both the maggot and the worm.

Yet though scientists be clever to destroy the germ for ever,
and succeed in their endeavour worms and maggots to restrain,
There is *one* worm near them glideth, and amongst them still resideth;
for the Book-worm yet abideth, with a Maggot on his brain!

After the St. James' Gazette.

CORRESPONDENCE.

WHAT THE CONGRESS HAS DONE FOR US.

SIR,

I cordially agree with your remarks, *re* the Congress in the last *Record*. Section III was undoubtedly the *most interesting* if not the *most important* of all the sections, and will, I venture to say, hold a prominent place in all future congresses.

Our profession made a *great upward step* at the Congress, and its members should never neglect to think well of themselves as they are, if educated, entitled to do. Nothing is truer than the old French proverb, "The world accepts us at our own valuation," of course we must not make an absurd valuation, but acting up to that enables many men to take a position they have no right to. We have the right, and we ought to use it. Greatest of all aristocracies is, I think, that of intellect, and the poorest of us may aspire to enter its ranks. Thanking you for the way in which *The Record* is now running, believe me,—Yours sincerely,

A DELEGATE.

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Messrs. H. Watkins-Pitchford, J. E. Miller, A. J. Sewell, E. A. Holingham, G. Mayall, "Journal of Comparative Medicine and Veterinary Archives," New York, (July and August).

We shall be obliged by early intelligence of all matters worth bringing under the notice of the profession, and thankful to any friends who may send us cuttings from local papers, containing facts of interest.

Original articles and reports should be written on one side only of the paper, and authenticated by the names and addresses of the writers, not necessarily for publication.

Communications for the Editor to be addressed 20 Fulham Road, S.W.